



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,565	12/18/2001	Alan D. Cetel	EH-10559	2683
7590 Pratt & Whitney Legal Department-Patent Group Mail Stop 132-13 400 Main Street East Hartford, CT 06108			EXAMINER SHEEHAN, JOHN P	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 01/26/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/023,565

Applicant(s)

CETEL, ALAN D.

Examiner

John P. Sheehan

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-19 is/are pending in the application.
- 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 15 to 19 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:
 - I. Claims 1 to 3 and 5 to 14 are drawn to a directionally solidified nickel base superalloy.
 - II. Newly added claims 15 to 19 are drawn to a method of making a directionally solidified article comprising the steps of melting and casting the recited nickel base superalloy.
2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by a materially different process such as, for example, forming the alloy by sputtering, flame spraying, powder metallurgy, etc. followed by directional solidification. Further the process recited in method claims 15 to 19 does not actually recite a directional solidification step and therefore it is questionable whether the process of claims 15 to 19 is actually a process of making the directionally solidified product of claims 1 to 3 and 5 to 14. Additionally claims 16 to 19 recite machining, applying an oxidation and/or corrosion resistant layer to the article, applying an oxidation and/or corrosion coating to

an internal passage of the article and applying a thermal barrier to the article respectively. The product of claims 1 to 3 and 5 to 14 is not machined and/or coated in any manner, therefore the processes recited in claims 15 to 19 are not processes of making the product recited in original claims 1 to 3 and 5 to 14.

3. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 15 to 19 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1 to 3 and 5 to 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

I. The claim limitation that the claimed alloys possess the recited properties "without application of a solution heat treatment" (claims 1 and

12, the last two lines), added by the amendment submitted December 2, 2008, does not find support in the application as filed.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Rejection Based On Esser

7. Claims 1 to 3 and 5 to 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esser et al. (Esser, WO 99/67435).

Esser teaches a directionally solidified (DS) nickel base super alloy (Abstract) having a composition that overlaps the alloy recited in applicants' claims (page 4, line 21 to page 5, line 15) and the use of the disclosed alloy in making gas turbine engine parts (page 5, lines 16 to 20). Esser teaches that the disclosed directionally solidified nickel based alloy typically has a plurality of grains as is recited in appellants' claims 1 to 3, 5 to 11, 13 and 14. It is noted that applicants' claim 12 recites that the claimed alloy is "for use in columnar grain directionally solidified articles" (claim 12, line 2, emphasis added by the Examiner). Thus, claim 12 does not require that the claimed alloy is actually in a columnar grain directionally solidified form. Esser also teaches that the disclosed alloy includes 0.4 to about 1.5 volume % of a phase based on tantalum carbide (page 6, lines

Art Unit: 1793

2 to 5) as is claimed in each of claims 1 to 3 and 5 to 14. In view of the use of the phrases, "up to" (claim 1, line 6) and "less than" (claim 12, line 5) used in the instant claims to describe the zirconium content of the claimed alloy, the applicants' claims are considered to encompass 0% zirconium. The following table compares Esser's disclosed alloy (page 4, lines 21 to page 5, line 15 and page 6, lines 2 to 5) and the alloy composition recited in applicants' independent claims.

	Esser	Applicants' Claim 1	Applicants' Claim 12
Cr	9.5-14%	10-13.5%	12%
Co	7 to 11%	8-10%	9%
Mo	1-2.5%	1.25-2.5%	1.9%
W	3-6%	3.25-4.25%	3.8%
Ta	1-6%	4.5-6.0%	5%
Al	3-4%	3.25-4.5%	3.6%
Ti	3-5%	3-4.75%	4.1%
Nb	0-1%	No Intentional Addition	No Intentional Addition
B	0.003-0.015%	0.0025-0.025%	0.015%
Zr	Silent	Up to about 0.05% Which encompasses 0%	less than 0.02% Which encompasses 0%
C	0.05-0.11%	0.05-0.15%	0.1%
Phase Based On Tantalum Carbide	0.4 to 1.5 vol. %	0.4 to 1.5 vol. %	0.4 to 1.5 vol. %

Esser's silence with regard to the disclosed alloy containing any Zr is considered to mean that Esser's alloy does not contain Zr.

The claims and Esser differ in that Esser: (1) does not teach the exact same alloy proportions; (2) does not disclose the use of Zr; and (3) is silent with respect to the properties recited in the claims and (4) Esser does not explicitly recite that the alloy is not solution heat treated.

However one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because applicants' claims recite Zr proportions that encompass 0% Zr, that is, these claims do not require Zr. Further, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy proportions taught by each of the references overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art references, particularly in view of the fact that;

"The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Further, regarding the properties recited in the claims, it is the Examiner's position that in view of the fact that Esser's alloys have compositions that overlap the alloy compositions recited in the instant claims and have the exact same amount of a phase based on tantalum carbide, Esser's alloys would be expected to possess all the same properties as recited in the instant claims, *In re Best*, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, *In re Best*, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' *In re Spada*, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

Finally, regarding, the limitation that the alloy is not solution heat treated, it is the Examiner's position that this limitation is in effect a process limitation. However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process steps recited in applicants' product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re*

Thorpe, 777 F.2d 695,698,227 USPQ 964,966 (Fed. Cir.1985).

Further, Esser's product, prior to the heat treatment taught by Esser is in the non-heat treated state as recited in the instant claims.

Rejection Based On Mitsuhashi

8. Claims 1 to 3 and 5 to 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuhashi et al. (Mitsuhashi, EPO Document No. 0 855 449 A1).

Mitsuhashi teaches a nickel base columnar grain directionally solidified super alloy (page 3, lines 39 to 46) having a composition that overlaps the alloy recited in applicants' claims (page 3, lines 23 to 45) and the use of the disclosed alloy in turbine engine parts (page 3, lines 23 to 26). In view of the use of the phrases, "up to" (claim 1, line 6) and "less than" (claim 12, line 5) used in the instant claims to describe the zirconium content of the claimed alloy, the applicants' claims are considered to encompass 0% zirconium. Mitsuhashi teaches that the disclosed alloy is Zr free (page 3, lines 43 and page 7, lines 5 to 13). Thus, with respect to zirconium, Mitsuhashi is considered to encompass the instantly claimed alloy containing 0% zirconium. The following table compares Mitsuhashi's disclosed alloy (page 4, lines 15 to 20) and the alloy composition recited in applicants' independent claims.

	Mitsuhashi	Applicants' Claim 1	Applicants' Claim 12
Cr	12-14.3%	10-13.5%	12%
Co	8.5 to 11%	8-10%	9%

Art Unit: 1793

Mo	1-3.5%	1.25-2.5%	1.9%
W	3.5-6.2%	3.25-4.25%	3.8%
Ta	3-5.5%	4.5-6.0%	5%
Al	3.5-4.5%	3.25-4.5%	3.6%
Ti	2-3.2%	3-4.75%	4.1%
Nb	Silent	No Intentional Addition	No Intentional Addition
B	0.005-0.05%	0.0025-0.025%	0.015%
Zr	Free of (pg. 3, line 42 and pg. 7, lines, 5 to 13)	Up to about 0.05% Which encompasses 0%	less than 0.02% Which encompasses 0%
C	0.04-0.12%	0.05-0.15%	0.1%
Phase Based On Tantalum Carbide	Silent	0.4 to 1.5 vol.%	0.4 to 1.5 vol.%

The claims and Mitsuhashi differ in that Mitsuhashi: (1) does not teach the exact same alloy proportions; (2) does not disclose the use of Zr; (3) is silent with respect to the properties recited in the claims and the presence of tantalum carbides and (4) Mitsuhashi does not explicitly recite that the alloy is not solution heat treated..

However one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because as explained above, applicants' claims recite Zr proportions that encompass 0% Zr, that is, the claims do not require Zr and thus with respect to Zr content these claims are considered to be

encompassed by Mitsuhashi's Zr free alloy. Further, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy proportions taught Mitsuhashi overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in Mitsuhashi, particularly in view of the fact that;

"The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Further, regarding the properties recited in the claims and the presence of tantalum carbides, it is the Examiner's position that in view of the fact that the alloys taught by Mitsuhashi have compositions that overlap the alloy compositions recited in the instant claims, Mitsuhashi's alloys would be expected to possess all the same properties as recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can

be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

Finally, regarding, the limitation that the alloy is not solution heat treated, it is the Examiner's position that this limitation is in effect a process limitation. However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process steps recited in applicants' product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Further, Mitsuhashi's product, prior to the heat treatment taught by Mitsuhashi is in the non-heat treated state as recited in the instant claims.

Response to Arguments

9. Applicant's arguments filed September 23, 2009 have been fully considered but they are not persuasive.

Regarding the Rejection of Claim 1 to 3 and 5 to 14 Under 35 USC 112, First Paragraph

10. Regarding the rejection under 35 USC 112, first paragraph, on the basis that the claim limitation, "without application of a solution heat treatment", does not find support in the application as filed, applicants have cited paragraphs [0009], [0014] and [0018](the last sentence) of the specification as support for this limitation. The Examiner does not agree. Paragraph [0009] discusses the effect of Hf on the temperature range of solution heat treatment, however paragraph [0009] does not address the instantly claimed invention and the absence of a solution heat treatment. Paragraph [0014] of the specification states that,

"It would be further desirable to provide such an alloy which does not require a solution heat treatment in order to achieve adequate creep strength". (emphasis added by the Examiner)

While the last sentence of paragraph [0018] of the specification states,

"However, such articles as cast may have adequate creep strength...such that solution heat treatment is unnecessary." (emphasis added by the Examiner)

Paragraph [0014] and the last sentence of paragraph [0018] are directed to the article having adequate creep strength in the absence of a solution heat treatment. However, none of these cited sections of the specification forms the basis for the claim limitation, "without application of a solution heat treatment", that is, none of the cited sections of the specification establish a nexus between the absence of a solution heat treatment and the properties recited in the claims.

Regarding the Rejection of Claim 1 to 3 and 5 to 14 Under 35 USC 103 in view of

Esser

Applicants arguments: (1) that the Examiner's statement that, "Esser's product, prior to the heat treatment taught by Esser is in the non-heat treated state as recited in the instant claims" is misplaced; (2) that Esser teaches, suggests and motivates one skilled in the art to solution heat treat Ni base superalloys to provide good properties; and (3) that Esser does not teach a Ni base superalloy having good properties without a solution heat treatment are not persuasive. When the products produced by the reference process are neither transitory nor ephemeral but are by nature tangible and permanent pending the subsequent treatment to which they are subjected, such products, though intermediate, are anticipatory of the product. Ex parte Brinton, 82 USPQ 112 (Bd. Pat. App. & Int. 1948). Applicants' arguments are based on differences between Esser's disclosed process and applicants' disclosed process. However, applicants' claims are not directed to a process but rather a product with a negative process limitation, "without application of a solution heat treatment", that is, applicants' claims are directed to a product claimed in a product by process format. As previously stated by the Examiner, the process limitation recited in applicants' product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of

production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695,698,227 USPQ 964,966 (Fed. Cir.1985).

Applicants have not established that their instantly claimed Ni base superalloy is any different than the solution heat treated Ni based superalloy taught by Esser or Esser's alloy prior to Esser's solution heat treatment.

11. Applicants' argument that the heat treatment taught by Esser, if applied to the present invention would destroy the part is not persuasive. Applicants have not provided any evidence in support of their statement that the heat treatment applied to Esser's alloy if applied to the present invention would destroy the part. Further, applicants' claims are not directed to applicants' disclosed process but rather applicants' claims are directed to an alloy. Further, whether or not the heat treatment taught by Esser would destroy the part is not considered to be relevant in that applicants' claims are not directed to a process but rather applicants' claims are directed to an alloy composition, which as set forth in the statement of the rejection is obvious in view of Esser's alloy. Finally, in the decision mailed, July 22, 2008, the Board of Patent Appeals and Interferences stated, in affirming this rejection (decision, page 17, the last paragraph);

In addition, Appellants have provided no evidence to support their statement that the parts of the present invention would be destroyed at the temperatures applied in Esser. Appellants' Specification discloses heat treatments at temperatures of up to 2200°F compared to 2282°F in Esser. (FF 3 and 9). Appellants' Specification does not indicate that heat treatments applied at temperatures above 2200°F would be detrimental to the claimed articles. (FF 4).

Regarding the Rejection of Claim 1 to 3 and 5 to 14 Under 35 USC 103 in view of

Mitsuhashi

12. Applicants argument that the Examiner's statement that "Mitsuhashi's product, prior to the heat treatment taught by Esser is in the non-heat treated state as recited in the instant claims" is misplaced is not persuasive. When the products produced by the reference process are neither transitory nor ephemeral but are by nature tangible and permanent pending the subsequent treatment to which they are subjected, such products, though intermediate, are anticipatory of the product. Ex parte Brinton, 82 USPQ 112 (Bd. Pat. App. & Int. 1948).

13. Applicants' argument that the heat treatment taught by Mitsuhashi, if applied to the present invention would destroy the part is not persuasive. Applicants have not provided any evidence in support of their statement that the heat treatment applied to Mitsuhashi's alloy if applied to the present invention would destroy the part. Further, applicants' claims are not directed to applicants' process but rather applicants' claims are directed to an alloy. Further, whether or not the heat treatment taught by Mitsuhashi would destroy the part is not considered to be relevant in that applicants' claims are not directed to a process but rather applicants' claims are directed to an alloy composition, which as set forth in the statement of the rejection is obvious in view of Mitsuhashi's alloy. Applicants have not established that their instantly claimed Ni base superalloy is any different than the solution heat treated Ni based superalloy taught by Mitsuhashi or Mitsuhashi's alloy prior to Mitsuhashi's solution heat treatment. Finally, in the decision

mailed, July 22, 2008, the Board of Patent Appeals and Interferences stated, in affirming the rejection based on Esser (decision, page 17, the last paragraph);

In addition, Appellants have provided no evidence to support their statement that the parts of the present invention would be destroyed at the temperatures applied in Esser. Appellants' Specification discloses heat treatments at temperatures of up to 2200°F compared to 2282°F in Esser. (FF 3 and 9). Appellants' Specification does not indicate that heat treatments applied at temperatures above 2200°F would be detrimental to the claimed articles. (FF 4).

Although this quote is directed to the decision based on Esser, it is equally applicable to the rejection based on Mitsuhashi.

14. The Examiner reiterates that applicants have not established that their instantly claimed Ni base superalloy is any different than the solution heat treated Ni based superalloy taught by Esser or Mitsuhashi or Esser's or Mitsuhashi's alloy prior to solution heat treatment.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (7:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

/John P. Sheehan/
Primary Examiner, Art Unit 1793

JPS